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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

CLAIMS

Claims 1 to 25 (canceled).

26.(currently amended) A circuit for trimming a functional resistor, the circuit comprising:

a thermally-isolated micro-platform suspended over a cavity on a substrate;
a plurality of functional thermally-trimmable resistors spaced apart on the
thermally-isolated on a substratemicro-platform; and

trimming circuitry for subjecting a portion of the substrate thermally-isolated
micro-platform to heat pulses for thermal trimming such that a resistance value of one
of said plurality of functional thermally-trimmable resistors is trimmed while a
resistance value of remaining ones of said plurality of functional thermally-trimmable
resistors remains substantially untrimmed.

27.(currently amended) A circuit as claimed in claim 26-56, wherein said trimming circuitry comprises circuitry for passing a signal through said one of said plurality of functional thermally-trimmable resistors.

28.(currently amended) A circuit as claimed in claim 2656, wherein said trimming circuitry comprises at least one heating resistor on said micro-platform for receiving a signal and trimming said one of said plurality of functional thermally-trimmable resistors.

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29. (currently amended) A circuit as claimed in claim 28, wherein each of said at least one heating resistor traces at least one of said plurality of functional-thermally-trimmable resistors.

30. (currently amended) A circuit as claimed in claim 29, wherein a first pair of functional-thermally-trimmable resistor and heating resistor is grouped and embedded with a second pair of functional-thermally-trimmable resistor and heating element so that locations of portions of said first pair and said second pair alternate on said thermally-isolated micro-platform.

31. (original) A circuit as claimed in claim 30, wherein said portions of said first pair and said second pair are separated by slots in said thermally-isolated micro-platform, thereby reducing heat transfer and increasing thermal isolation between said first pair and said second pair.

32. (original) A circuit as claimed in claim 31, wherein said slots are continuous.

33. (currently amended) A circuit as claimed in claim 2656, wherein said trimming circuitry comprises circuitry for transmitting a plurality of electrical pulses and measuring said resistance value of one of said plurality of functional-thermally-trimmable resistors in between each of said plurality of electrical pulses to determine whether a target resistance value has been obtained.

34. (currently amended) A circuit as claimed in claim 5626, wherein said trimming circuitry comprises circuitry for transmitting dynamically-shaped pulses to achieve substantially constant temperature as a function of time during a trimming pulse.

35. (withdrawn) A circuit for trimming circuit elements, the circuit comprising:
at least two resistive elements with non-zero temperature induced drift thermally-isolated on a substrate, such that said at least two resistive elements are

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subjected to a substantially same operating environment, at least one of said at least two resistive elements being thermally trimmable; and

trimming circuitry for thermally trimming said at least one of said at least two resistive elements;

wherein said at least two resistive elements are connected together in said circuit in a manner to compensate for said operating environment, and heat generated is distributed among the at least two circuit elements such that an effect of temperature drift is compensated.

36. (withdrawn) A circuit as claimed in claim 57, wherein said at least two resistive elements are connected together in series and an applied voltage is divided with a predetermined ratio.

37. (withdrawn) A circuit as claimed in claim 57, wherein said at least two resistive elements are temperature sensitive elements located closely on said at least one thermally-isolated micro-platform, and whose signals are combined to measure a temperature differential.

38. (withdrawn) A circuit as claimed in claim 57, further comprising a heating resistor on the at least one thermally-isolated micro-platform in close proximity to said at least one resistive element, wherein said trimming circuitry further circuitry for passing a signal through the heating resistor to increase its temperature significantly for the purpose of trimming said at least one resistive element.

39. (withdrawn) A circuit as claimed in claim 37, wherein said heating resistor and said at least one resistive element are on separate thermally-isolated micro-platforms.

40. (withdrawn) A circuit as claimed in claim 57, wherein said trimming circuitry for heating further comprises circuitry for transmitting a plurality of electrical pulses and measuring said resistance value of one of said at least two resistive elements

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in between each of said plurality of electrical pulses to determine whether a target resistance value has been obtained.

41. (withdrawn) A circuit as claimed in claim 57, wherein said trimming circuitry for heating comprises circuitry for transmitting dynamically-shaped pulses to achieve substantially constant temperature as a function of time during a trimming pulse.

42. (currently amended) A circuit for trimming a functional-resistor, the circuit comprising:

a functional-thermally-trimmable resistor on a substrate subject to a heat source having a power dissipation geometry adapted to obtain a substantially constant temperature distribution across said functional-thermally-trimmable resistor by dissipating more power at the boundaries of a heat-targeted region where there is greater heat loss, when a temperature of said functional-thermally-trimmable resistor is raised for trimming purposes; and

trimming circuitry for trimming the functional-thermally-trimmable resistor.

43. (currently amended) A circuit as claimed in claim 58, wherein said heat source comprises a heating resistor on said thermally-isolated micro-platform in close proximity to said functional-thermally-trimmable resistor, and wherein said trimming circuitry comprises circuitry for passing a signal through said heating resistor to trim said functional-thermally-trimmable resistor.

44. (currently amended) A circuit as claimed in claim 58, wherein said power dissipation geometry comprises a heater path that encircles the functional-thermally-trimmable resistor.

45. (currently amended) A circuit as claimed in claim 58, wherein said power dissipation geometry further comprises a heater path that provides more heat to edges of the functional-thermally-trimmable resistor and resulting temperature gradients across the at least one thermally-isolated micro-platform.

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46.(currently amended) A circuit as claimed in claim 58, wherein said power dissipation geometry comprises a heater path that substantially encloses said functional-thermally-trimmable resistor with said heating resistor.

47.(previously presented) A circuit as claimed in any one of claims 58, wherein said power dissipation geometry further comprises an increased density of resistive lines near locations where there is greater heat loss to compensate for the heat loss.

48.(currently amended) A circuit as claimed in claim 58, wherein said trimming circuitry for heating comprises circuitry for transmitting a plurality of electrical pulses and measuring said resistance value of one of said plurality of functional-thermally-trimmable resistors in between each of said plurality of electrical pulses to determine whether a target resistance value has been obtained.

49.(previously presented) A circuit as claimed in claim 58, wherein said trimming circuitry for heating comprises circuitry for transmitting dynamically-shaped pulses to achieve substantially constant temperature as a function of time during a trimming pulse.

50. (canceled)

51. (canceled)

52. (canceled)

53. (canceled)

54. (withdrawn) A circuit for calculating a temperature coefficient of resistance of a functional resistor, the circuit comprising:

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| a functional resistor on thermally isolated on a substrate;
| heating circuitry for injecting a heat pulse to raise a temperature of said
| functional resistor to a predetermined temperature;
| measuring circuitry for measuring a resistance value of said functional
| resistance at a plurality of temperatures; and
| calculating circuitry for calculating said temperature coefficient of resistance
| based on said resistance value at said temperatures.

55. (withdrawn) A circuit as claimed in claim 59, wherein said heating circuitry comprises a heating resistor on said at least one thermally-isolated micro-platform for passing a signal through said heating resistor and heating said functional resistor.

56. (canceled)

57. (withdrawn) A circuit as claimed in claim 35, further comprising at least one thermally-isolated micro-platform on said substrate, and wherein said at least two resistive elements are on said at least one thermally-isolated micro-platform.

58. (currently amended) A circuit as claimed in claim 42, further comprising a thermally-isolated micro-platform on said substrate, and wherein said functional thermally-trimmable resistor is on said thermally-isolated micro-platform.

59. (withdrawn) A circuit as claimed in claim 54, further comprising at least one thermally-isolated micro-platform on said substrate, and wherein said functional resistor is on said at least one thermally-isolated micro-platform.